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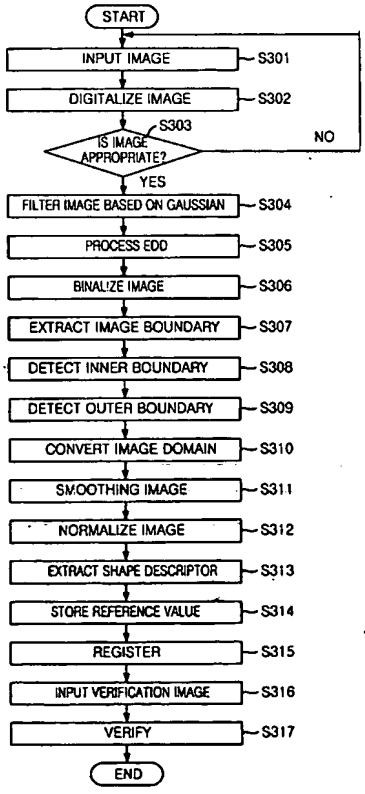
(54) Title: THE PUPIL DETECTION METHOD AND SHAPE DESCRIPTOR EXTRACTION METHOD FOR A IRIS RECOGNITION, IRIS FEATURE EXTRACTION APPARATUS AND METHOD, AND IRIS RECOGNITION SYSTEM AND METHOD USING ITS



(57) **Abstract:** Provided is pupil detection method and shape descriptor extraction method for an iris recognition, iris feature extraction apparatus and method, and iris recognition system and method using the same. The method for detecting a pupil for iris recognition, includes the steps of: a) detecting light sources in the pupil from an eye image as two reference points; b) determining first boundary candidate points located between the iris and the pupil of the eye image, which cross over a straight line between the two reference points; c) determining second boundary candidate points located between the iris and the pupil of the eye image, which cross over a perpendicular bisector of a straight line between the first boundary candidate points; and d) determining a location and a size of the pupil by obtaining a radius of a circle and coordinates of a center of the circle based on a center candidate point, wherein the center candidate point is a center point of perpendicular bisectors of straight line between the neighbor boundary candidate points, to thereby detect the pupil.

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